Module 01  Computer Hardware

The Computer Case
A computer case is an enclosure that encases all the components of a computer. The case is essentially the mounting platform for all the electronic devices that make up the computer. Typically, cases are square or rectangular boxes, usually beige in color (although the current trend is for all-black cases and matching peripherals), and made of steel, aluminum, or plastic.

Cases are primarily categorized in two ways: by their physical size (full tower, mini tower, and so on) and by the type of motherboard they are designed for (such as AT, ATX, or Mini-ATX).

Several common PC case styles are in use today. Let's take a quick look at each of these and how they differ.

**These styles include:**

- Full tower
- Mid tower
- Mini tower
- Desktop
Full Tower

A full tower case is a computer case that stands approximately 20–25 inches tall, has at least five 5 1/4-inch drive bays, and is designed to stand vertically on the floor next to a desk (instead of on the desk). This type of case usually has wheels so you can move it easily when you need to unplug a cable or do other work on the computer. Often, because of its sheer size, it will have stabilizing feet to prevent it from tipping over.

Mid Tower

A mid tower case is a computer case that stands between 16 and 19 inches tall, has at least three 5 1/4-inch drive bays, and is designed to stand vertically either on the floor or on a computer user’s desk next to the monitor. This type of case doesn’t have quite as much room inside as a full tower case, but it still has significant room for airflow and component layout.

Mini Tower

A mini tower case is a computer case that stands about 12 to 15 inches tall, has one or two 5 1/4-inch drive bays, and is designed to stand next to a computer monitor. It was designed to keep the small form factor of a desktop case but also keep the look of a tower, which is more visually appealing. Mini towers are often used in low-end or entry-level computer systems to keep the price down.

Desktop

A desktop case is designed to lie horizontally, with at least three 5 1/4-inch bays oriented horizontally and the 3 1/2-inch bays oriented vertically. The original IBM PC used this style of case (although the case for the original PC was much bigger). Currently, the dimensions for a typical full size desktop case are about 15 to 17 inches wide and 5 to 7 inches high.

Slim line

A slimline computer case usually has only one 5 1/4-inch drive bay, mounted horizontally (or possibly two, side by side). It’s designed to take up the least amount of desktop space, and is the smallest standardized form factor.

Proprietary

A proprietary case is a computer case that is designed to work with only one particular motherboard and set of components and is typically designed for a specific purpose.

Computers manufactured by Dell are a perfect example of PCs that use proprietary cases. Although these cases could be classified as mid tower or mini tower, they only work with Dell motherboards designed for the particular case and are therefore usually classified as proprietary.
Rear Panel View of a computer Tower

- PS/2 mouse port
- PS/2 keyboard port
- USB ports
- Serial (COM) ports
- Parallel (LPT) port
- USB ports
- VGA video port
- HD-50 SCSI port
- Slot cover for unused slot
- 10/100 Ethernet port
- IEEE-1394 port (FireWire)
- Game port
- DVI-I digital/analog video port
- Speaker and microphone ports

Internal View of a Computer Tower

1. Power supply
2. Memory modules
3. Processor with fan/heatsink
4. North Bridge chip with fan/heatsink
5. Add-on cards
6. Optical drives
7. Floppy drive
8. Hard drive
9. Empty PCI slot